# CSC-253 Advanced C# Programming Syllabus

## Course Information

Computer Technologies Division

Computer Science Department

**Course Description**

This course is a continuation of CSC 153 using the C# programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment.

**Credit Hours**: Three (3) semester hiurs

**Prerequisite: CSC153**

## Student Learning Outcomes

Upon completion of this course, students will be able to:

1. Design and create C# applications
2. Design classes and use them to create objects
3. Use inheritance to create derived classes
4. Design and use control structures
5. Design and use data structures
6. Use LINQ to query data structures
7. Use exception handling to create robust applications
8. Create, read, write and update data files
9. Design and implement efficient algorithms for sorting and searching
10. Write code to retrieve and manipulate data from a database

## Course Requirements and/or Expectations

1. Students are responsible for all of the information presented in the Wake Technical Community College Student Handbook.
2. Please note that computers are to be used at all times for official course purposes.
3. Use of computers for general web surfing, e-mailing, chat room discussions, social networking, and any other non-course related task is forbidden. Violation of this rule may result in a grade deduction and possible loss of computer privileges.
4. The college forbids the use of all audible electronic equipment during instructional time.
5. Forbidden devices include but are not limited to: cell phones, smart phones, MP3 players, tablets, and PDAs.
6. If a student misses a lecture or arrive late, he/she is responsible for the material presented, handouts distributed, and any announcements made that day. The instructor will not provide notes for missed classes.

## Required Textbooks

P. Deitel and H. Dieitel

*Visual C#: How to Program, sixth edition*

ISBN 9780134601540

## Grading or Evaluation

Labs: 28%

Midterm: 32%

Final Exam: 40%

## Disability Support Services

Wake Technical Community College does not discriminate on the basis of disability in the admissions or employment processes or in access to programs, facilities, or activities. Disability Support Services (DSS) is available for students who require academic accommodations due to any physical, psychological, or learning disability. Please visit the website for [Disability Support Services (opens in new window)](http://disabilityservices.waketech.edu/), URL: [http://disabilityservices.waketech.edu], for additional information. To connect with a DSS coordinator and determine eligibility, contact the Main campus at Phone: 919-866-5670 (Sorenson video phone for the deaf: 919-324-1508). Fax: 919-662-3616. Or, contact North campus office at Phone: 919-532-5713. Fax: 919-878-1896.

## Wake Tech Core Values

Wake Technical Community College will structure its operations, training and educational programs around the Core Values of accountability, respect, responsibility, critical thinking, communication, and collaboration.

* **Accountability**—Accountability is essential for an environment of learning. Those who are accountable stand by their words and actions, taking full responsibility for what they create and for what they contribute to the community.
* **Respect**—Respect is a prerequisite for enhancing learning. Community members who respect themselves and others help create a safe, yet open, climate of learning.
* **Responsibility**—Responsibility is the root of success. Students who assume personal responsibility for their education will reach their goals. Responsible students also make contributions to their communities.
* **Critical Thinking**—Critical thinking is the fundamental purpose of higher education. The ability to solve problems through the application of the appropriate skills is critical to all disciplines.
* **Communication**—Communication is increasingly the key competency for living and working in the information age. Communicating effectively in oral and written forms through traditional and new media is a powerful tool for personal and career success.
* **Collaboration**—Collaboration, by bringing together individual knowledge and talents, creates teams that are greater than the sum of their parts. Such teamwork maximizes benefits to individuals and the community.

## Policies

Students are responsible for reading the information and policies set forth in the [Wake Technical Community College catalog (opens in new window)](http://catalog.waketech.edu/), URL: [http://catalog.waketech.edu], as well as additional requirements set by the instructor. Students are held accountable for this information. New policies and policy changes will be communicated to students on the official [Updates page (opens in new window)](file:///C:\Users\kbennett\Documents\Updates%20page%20(opens%20in%20new%20window)), URL: [http://Updates.waketech.edu].

### Communication

**Appropriate Communication**—Students are expected to communicate in clear, correct, respectful Standard American English at all times. This includes all online or electronic communication, which should follow the standards of Internet etiquette (also known as “netiquette”). Students unfamiliar with these concepts and conventions should check with their instructors.

### Attendance Policy

**Absences**–The college catalog student handbook states that “students are expected to be in attendance at least 90 percent of all scheduled class meetings. An absence is defined as missing one-third or more of any regularly scheduled class meeting.” If you anticipate an absence, notify your instructor in advance. “If prior notification is not possible, the student should contact the instructor immediately upon returning to the College to determine the next course of action.” In an online course, an absence is defined as not completing an assignment on time. Students who miss more than 10 percent of class meetings will be withdrawn from the course without notice.

**Absences due to religious holidays**–The college catalog states that “Wake Tech students are allowed two class days of excused absences per academic year for religious observances. It is the student's responsibility to contact the instructor for each course in which work will be missed. The student must provide written notification to the instructor within the first two weeks of the semester, identifying the religious observance and date of the planned absence.”

Days missed for religious observances will be counted as absences, but they will not be considered part of the allowed 10%. Reasonable accommodations will be made for affected students in regards to any resulting missed work.

**Verification of Attendance in Online or Hybrid Courses**--In order to remain enrolled in an online or hybrid course, each student is required to open and complete the Course Entry Quiz in Blackboard by 11:59 PM on the semester 10% date. Students should complete the activity as soon as possible. Delay in completion may result in getting behind in coursework or in missing assignments.

Students who do not complete the Course Entry Quiz by the deadline will be dropped from the course with no tuition refund.

### Work Policy

Each project/assignment/exercise will come with specific instructions for completion. All studio/class work MUST be completed (if applicable)! It is your responsibility throughout the semester to keep up with your course work. It is not the responsibility of the instructor to advise you of missed work during the term or on the last week of the term.

Exams must be taken on the assigned date; otherwise a grade of zero will be assigned. Any exception to this policy must be the result of a documented emergency or prior arrangement with the instructor. There will be no exceptions to this rule.

ANY MAKEUP EXAMS must be taken prior to the scheduled exam date. This must be pre-arranged with the instructor. Last minute arrangements are not acceptable.

### Official Communication with Students Policy

Every curriculum student is provided with an official Wake Tech email account through the [Wake Tech student portal (opens in new window)](http://my.waketech.edu), URL: [http://my.waketech.edu].

* Students must first activate their my.waketech.edu account, wait 24 hours, and then activate the email account.
* This college-issued email account is to be used for all email correspondence with instructors and other college officials.

Official correspondence from the college (communications from instructors, information about registration or financial aid, etc.) will be sent to students’ Wake Tech email address **ONLY**. Instructors and college officials may refuse to accept student emails sent from other addresses. Review the Registration and Records section in [Wake Tech’s catalog (opens in new window)](http://catalog.waketech.edu/), URL: [http://catalog.waketech.edu], for updates to the Official Communication with Students Policy.

### FERPA Statement

Review the Academic Policies section of [Wake Tech’s catalog (opens in new window)](http://catalog.waketech.edu/), URL: [http://catalog.waketech.edu], for updates.

Following the *Family Educational Rights and Privacy Act* (FERPA) *of 1974*, instructors are prohibited from discussing a student’s grade or other matters related to academic performance outside of the Blackboard grade center. Faculty may send grades to individual students via email only when written authorization from the student is on file (WTCC Form 1126).

The Authorization to Release Instructor Graded Material (WTCC Form 1126) does not apply to final grades. Final grades will be accessed through WebAdvisor only or with a Request for Transcript.

Students may request this form from the instructor.

### Wake Technical Community College Academic Integrity Policy

“Wake Technical Community College expects students to demonstrate the highest personal integrity in all academic work and behavior…. Students may be asked to sign a statement of academic integrity upon entering Wake Tech classes.” Review the Student Code of Conduct, Rights, and Responsibilities section of [Wake Tech’s catalog (opens in new window)](http://catalog.waketech.edu/), URL: [http://catalog.waketech.edu], for additional information.

### Student Code of Conduct

“Students are expected to conduct themselves in accordance with generally-accepted standards of scholarship and conduct. The purpose of the Student Code of Conduct (the Student Code) is not to restrict student freedom but to protect the rights of all students in their academic pursuits.” Review the Student Code of Conduct, Rights, and Responsibilities section of [Wake Tech’s catalog (opens in new window)](http://catalog.waketech.edu/), URL: [http://catalog.waketech.edu], for additional information.

### Getting Help

If you need help in an assignment, you have a few options:

(1) Email me your questions at least 24 hours before it is due. I will get back to you within 24 hours (usually within a few hours).

(2) Post it on the Discussion Forum of this course and see whether other students give you help.

Everything you turn in must be your own work. If somebody gives you help, you must understand what that person told you and write the answer yourself. I reserve the right of asking you to explain the answers you submitted in assignments and exams.

## Schedule

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| --- | --- | --- | --- |
| Week | Topics | Textbook | Due Date |
| 01 | Creating C# Console Applications | Ch. 3 & 4 | 8/21/19 |
| 02 | Control Structures | Ch. 5 & 6 | 8/28/19 |
| 03 | Methods: A Deeper Look, Arrays | Ch. 7 & 8 | 9/4/19 |
| 04 | LINQ | Ch. 9 | 9/11/19 |
| 05 | Classes and Objects: A Deeper Look | Ch. 10 | 9/18/19 |
| 06 | Object-Oriented Programming: Inheritance | Ch. 11 | 9/25/19 |
| 07 | OOP: Polymorphism and Interfaces | Ch. 12 | 10/2/19 |
| 08 | **Midterm Exam** | -- | **10/9/19** |
| 09 | Exception Handling | Ch. 13 | 10/16/19 |
| 10 | Strings and Characters: A Deeper Look | Ch. 16 | 10/23/19 |
| 11 | Files and Streams | Ch. 17 | 10/30/19 |
| 12 | Searching and Sorting | Ch. 18 | 11/6/19 |
| 13 | Custom Linked Data Structures | Ch. 19 | 11/13/19 |
| 14 | Advanced Topic | TBA | 11/20/19 |
| 15 | Advanced Topic | TBA | 12/4/19 |
| 16 | **Final Exam** | **--** | **12/11/19** |